

DEPARTMENT OF DEFENSE
OFFICE OF THE ACTUARY



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REPLY TO DOD OFFICE OF THE ACTUARY

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Dear SBP Disk User,

The DoD Office of the Actuary has made major modifications to the SBP disk programs that you receive each year. We are sure you'll find the new versions of these programs to be much more efficient and user-friendly. Each of the programs now runs in Microsoft Excel and is interactive. As the users of these programs, we welcome your comments and suggestions. We would like to know which programs you find the most valuable. Is there anything we could add? What changes would you like to see?

Below are instructions for using the new programs and descriptions of what appears on the screen:

Formatting and Appearance

When using these programs, the information has been formatted to appear on your screen based on certain settings. We hope the settings will transfer with the programs, but it may depend on the default settings on each user's individual computer. If any of the Task Bar, Toolbars, Formula Bar, or Status Bar appear when you open one of these programs, we recommend that you hide them from your screen before performing the program's operations. To do so, try the following:

From the top menu, go into *View* and uncheck any of these that are checked. When unchecking toolbars, you'll have to go into one more drop-down menu. Do so and make sure that none of the toolbars are checked.

In addition to those, you should not see Row and Column Headings or gridlines. If you do, go to *Tools, Options, View*, and do the following:

- Under *Show*, all boxes should be unchecked.
- Under *Comments*, you must select one choice . . . pick *None*.

- Under *Objects*, you must select one choice. . .pick *Show All*.
- Under *Window Options*, *Horizontal Scroll Bar*, *Vertical Scroll Bar*, *Sheet Tabs* should be checked. *Zero Values* will be checked in some cases, unchecked in others. Leave this alone. All other boxes in this section should be unchecked.

Descriptions and Uses of Programs

Below are some suggested uses of these programs and explanations for the information provided. We recommend that retirement counselors open the programs and go through this document ahead of time to better familiarize yourselves with what has been provided. The DoD Office of the Actuary is available to answer questions and assist you.

SBP Premium – The purpose of this program is to allow one to see what his or her monthly SBP premium would be under different base amounts and supplemental percent choices. The sheet “*Retiree Information*” should pop up when opening this spreadsheet. Fill in all of the boxes. In some cases, such as when asked for a month, a drop-down menu will appear. Click on the appropriate choice. In other cases, such as retiree base amount, you will be prompted for an entry. In some cases, the program will only accept certain values. For example, for year of birth, the program will not accept 2100. When you have finished, go to “*Premiums*”. That is the premium for your selection. If you would like, you may print out the information by going to *File, Print, OK*. You may go back to “*Retiree Information*” as many times as you like and enter different base amounts or supplemental percents. **The purpose of this and all of the programs is to try different scenarios to see which choice works best for you.**

For this and all programs, if you want to save your entries (for counselors, saving a member’s entries), go to *File, Save As*, and then select a new name. This way, when the program opens the next time, it will revert back to the original look.

SBP Probability – This program is designed to show a new retiree the probability that his or her spouse will ever collect SBP benefits, i.e., will the spouse outlive the retiree? The program uses mortality rates established by the DoD Office of the Actuary and approved by the DoD Retirement Board of Actuaries. When opening this program, the sheet, “*Information and Results*” will pop up. The user needs to fill in the boxes and the results will appear in the yellow box at the bottom. The program calculates the probability as of the date you enter for retirement. Thus, it assumes that both the member and the spouse will survive at least until that date. If you would like to see the resulting probability from a different point in time, such as today, then enter that date in the boxes for date of retirement. You should read the disclaimer by selecting the tab, “*Disclaimer*”. This sheet outlines the limitations of this program. **Please note that since SBP is designed to replace a retiree’s income for a surviving spouse, it is not necessarily advisable to decline SBP just because the resulting probability is less than 50%.**

SBP Subsidy – This program shows a retiree who is facing the decision of whether or not to elect SBP the value of SBP for his or her unique situation. SBP is a government-subsidized program, meaning that the cost to the average participant is less than the benefit to that participant. However, because each member's situation is different (age, gender, health, pay, etc.), that projected subsidy varies, and in some cases the benefit may be unsubsidized. The program also shows a prospective retiree the value of the benefit that the spouse would receive at different times that it might be paid. When you open the program, the sheet "*Personal*" should pop up. Fill in all of the information for your situation and then go to "*Career*" and continue by entering your career information. On this sheet, you are asked for your SBP base amount. We suggest that after running the program once, you go back to this and enter different amounts to help decide what amount works best for you. Continue by selecting "*Retiree Assumptions*" and fill in the boxes there. Note that this sheet suggests going to other sheets, "*Taxes*", "*Mortality & Health*", "*Economics*", and "*Message From Chief Actuary*". Those sheets will give you some explanation and direction for completing the "*Retiree Assumptions*" sheet. We strongly suggest reading those.

The results appear on the sheets "*Subsidy*" and "*Cost & Benefits*". The Subsidy sheet has the following information for different base amounts, including the one that the user selects:

- **Base Amount** – That is the amount of SBP coverage you chose and the amount of the benefit your spouse will receive (before Cost of Living Increases) in the event of your death.
- **Monthly Retired Pay** – Your retired pay after the SBP premium deduction.
- **Monthly SBP Premium** – Self-explanatory.
- **Present Value Pay & SBP** – This is the present value of your retired pay and your spouse's SBP benefits at the time of your retirement given the assumptions that you chose. This value is the after-tax amount of retired pay following SBP premium deductions and including potential SBP payments to your spouse. It values future pay based on the life expectancies of you and your spouse according to mortality rates approved by the DoD Retirement Board of Actuaries. You could think of this as the average amount of money required to be placed in an interest-bearing account to fund all of your retired pay and all of your spouse's SBP benefits. The first line is the present value of your retired pay without any SBP premiums or SBP benefit payments. Subsequent lines subtract the present value of SBP premiums and add the value of SBP benefits for that particular base amount to this figure.
- **Present Value SBP Benefits** – This is the present value of your spouse's SBP benefits at the time of your retirement. Even though the first potential payment is in the future and there is no certainty that any payment will be made to a spouse, there is a present value for these payments. In this case, think of it as the amount of money required to be placed in an interest-bearing account to pay for the SBP benefits.

- **Present Value SBP Premiums** – This is the present value of SBP premiums. In other words, this represents the present value of the deduction from the member's pay for SBP coverage.
- **Government Subsidy** – If this is a positive number, it is the percent of your spouse's SBP benefits that are being paid for by the government. In that case, what you are getting in SBP is worth more than what you are paying. If it is a negative number, then the value of the SBP benefits is less than the cost to you. That number would then be the percent of your premiums that are not being paid back to you in equal value. Note that these calculations are after taxes. Since in virtually all cases a surviving spouse will be in an equal or lower tax bracket than a husband and wife together, the after-tax subsidy will be higher than the pre-tax subsidy.
- **For the Base Amount You Have Chosen** – Below the chart, the program shows you (1) how much more (or less) your retirement is worth by electing the SBP base amount selected on the "*Career*" sheet compared to not electing any SBP coverage. This is the percent difference between the bottom line and the top line of the column, Present Value Pay & SBP. It also shows you (2) how much more (or less) in percent terms the value of SBP benefits is versus your SBP premiums. This is the percent increase (or decrease) between Present Value SBP Benefits and Present Value SBP Premiums on the Base Chosen by Retiree line. Both items (1) and (2) are after-tax values.
- The final item on the *Subsidy* sheet shows the coverage to be selected that maximizes the present value of your retired pay. **This may not necessarily be the best choice of coverage for you. There are numerous other factors that need to be considered when making an SBP election decision.**

The sheet "*Costs & Benefits*" shows the value of SBP benefits at different times that SBP benefits to a spouse might begin.

- **Year, Member Age, Spouse Age** – Self-Explanatory for the years indicated in the subtitle. Ages are the attained ages in a given year as of the same month that the member retired.
- **Annual Costs After Taxes and Cumulative Cost After Taxes** – Self-Explanatory. Note costs after 30 years are \$0 and the cumulative column does not increase after that. Also, note that the annual costs increase by the cost-of-living increase selected by the retiree. In the first year, only a partial cost-of-living increase is applied.
- **Annual Benefit After Taxes**– Self-Explanatory. Note reduction in benefits the year after the spouse turns 62. The decrease is by 20/55 after a cost-of-living increase. Note how in all other years, benefits increase by the cost-of-living increase selected by the retiree.
- **Lifetime Value of Benefit if Member Dies in This Year** – Is explained by the bottom three lines of this page.

To print any page, go to that page and from the top menu select *File, Print, OK*.

SBP Supplemental – This program follows much of the same logic as the *SBP Subsidy* program, but does so for Supplemental Coverage. Unlike standard SBP, supplemental SBP is not intended to be subsidized. It is intended to be cost-neutral before taxes, meaning that pre-tax benefits to the spouse and the cost to the member will be the same in the aggregate. Depending on each retiree's unique circumstances, some retirees will have a positive subsidy and some a negative subsidy.

The directions for this program are the same as the *SBP Subsidy* program. Though you are not asked for exactly the same information, fill out the "*Personal*", "*Career*", and "*Retiree Information*" sheets. We suggest that you run it for more than one coverage amount and then compare the results.

On the "*Subsidy*" sheet, the rows show values for declining all SBP coverages, electing SBP full base amount without any supplemental, and for electing each of the four supplemental percent options. Below are descriptions under each column heading. For some, there is a different calculation performed on the "None" (no standard or supplemental SBP) row.

- **Monthly Retired Pay** – Your retired pay after the SBP and SSBP premium deductions.
- **Monthly Supplemental SBP Premium** – Self-explanatory.
- **Total Monthly SBP Premium** – This is the Supplemental and the Standard SBP Premium added together. The premium for Standard SBP only is in the second row of this column. That value added to the value in the previous column for rows 3-6 should be the total monthly premium that you see.
- **Present Value Pay & SBP Inc. Supp.** – This is the present value of your retired pay and your spouse's standard and supplemental SBP benefits, namely the amount needed to fund your retired pay at the time of your retirement for all SBP and supplemental options.
- **Present Value Supplemental Benefits** – For the bottom four lines, this is the present value of your spouse's supplemental benefits only. The second line is the present value of standard SBP only and the first line is not applicable.
- **Present Value Supplemental Premiums** – Same as the items in Supplemental Benefits, except for the premiums deducted from pay for survivor coverage.
- The entry on the top line in the **Present Value Pay & SBP Inc. Supp.** column is the value of just the retired pay before any SBP coverage. The entry on the second line in that column is the entry from the first line added to the difference between the value of SBP benefits and the value of SBP premiums found on the second line. That entry is the value of retired pay plus the value of the standard SBP and without any supplemental SBP.

Each subsequent entry adds the difference between the value of 5% supplemental benefits and 5% supplemental premiums.

- **Full Government Subsidy** – The second line is the subsidy for standard SBP only. Subsequent lines are the total subsidy for the combination of standard SBP and that percent's supplemental SBP. The supplemental premiums were derived by the Office of the Actuary with the intention of being cost-neutral; namely, the pre-tax subsidy is intended to be 0%. However, because taxes were not considered when creating the rates, when taxes are applied in this program, supplemental SBP, in the majority of cases, is subsidized by the government.

The items below the chart show:

- The subsidy for just the supplemental part of SBP. In the chart, this figure gets absorbed into the full government subsidy calculations. The subsidy percent will be the same for all supplemental choices. The difference is the government will be contributing (if a positive subsidy) the same percent, but of a different dollar amount depending upon the amount of coverage. The subsidy for supplemental SBP is always lower than the subsidy for standard SBP. Each increment of supplemental SBP will lower the overall SBP subsidy. However, even though the subsidy percent is lower, the subsidy in actual dollars may be higher.
- If the subsidy for standard SBP is positive, this item will show the percent increase or decrease in value of your spouse's SBP benefits when you add supplemental coverage. It refers to the amount you chose on the "*Career*" page. If the subsidy for standard SBP is negative, this shows you the percent change in value of adding supplemental to what your full retirement value with standard SBP only was.
- This compares the value of supplemental benefits your spouse can expect to receive with the premiums for supplemental coverage you expect to pay. This is an after-tax comparison.

The sheet "*Costs & Benefits*" is presented exactly the same as in the **SBP Subsidy** program. All figures are standard SBP plus the selected supplemental SBP.

Similarly to the **SBP Subsidy** program, the final item on the *Supplemental* sheet shows the coverage amount that maximizes the present value of your retired pay. As with standard SBP, this may not necessarily be the best choice of coverage for you.

The commentary in the **SBP Subsidy** program on sheets "*Taxes*", "*Mortality & Health*", "*Economics*", and "*Message From Chief Actuary*" apply to supplemental SBP. Though they are not included in the **SBP Supplemental** program, if they have not been reviewed already, they should be as part of running the program.

SBP Insurance– This program shows a financial comparison between buying SBP at the time of retirement and purchasing a term life insurance policy at that time. A more complete description of this program is on the sheet “*SBP vs Term*”.

Similar to the **SBP Subsidy** and **Supplemental** programs, fill out the “*Personal*”, “*Career*”, and “*Retiree Information*” sheets. On the “*Personal*” sheet, you are asked for insurance coverage. This is an amount of term insurance that you may be considering purchasing. We suggest that you try several different values. A good value to select is the amount of coverage that you would be able to buy with your after-tax SBP premiums. We also suggest entering different dates in the item *Year of Insurance Payment*. We are not asking you to predict your death, but rather to see how long a lump sum insurance payment would last given that it was paid in a certain year. This is discussed in “*SBP vs Term*”. Please also read “*Taxes*” and “*Economics*”. The “*Taxes*” sheet on this program is different from the earlier programs. It discusses taxes in the context of contrasting SBP and term life insurance. The “*Economics*” sheet is the same as the one in the **Subsidy** program.

The analysis from your entries and other pertinent information appears on “*Comparison*”. The chart starts with the year that is selected in “*Personal*” to be the year of the insurance payment. It ends when either the insurance runs out or the spouse reaches the end of his/her expected life. The tag line at the bottom shows which of those it is and in what year, if applicable, that occurs.

Year and *Spouse Age* are self-explanatory.

Life Insurance Proceeds – This shows how much of your insurance payment is available on the first day of the year indicated in the first column. The top line will always be the amount of insurance selected and the year selected as the payment date. The program assumes the insurance balance is invested at the after-tax interest rate that you selected in “*Retiree Assumptions*”, and that your spouse will spend the after-tax annuity he or she would get from SBP. Each subsequent line shows what is left after that calculation.

Annual Annuity After Taxes – It is the annuity less taxes, according to the tax rate you selected. Note that after your spouse’s age 62, the value decreases unless 20% supplemental SBP was chosen.

The tag line at the bottom will either read “That Insurance is Expected to Run Out in. . .” or “An Insurance Payment of \$\$\$ Would be Expected to Outlast Your Spouse’s SBP Benefits,” depending upon which of these is the case. By changing the amount of life insurance selection on the “*Personal*” sheet, you can see how much insurance is needed to match your spouse’s life expectancy.

Along the right side, the program also provides two more useful pieces of information. The item in blue shows what the spouse’s expected age at death is at the time the SBP decisions need to be made. In the event of an unexpected death by the member right after retirement, this is how long the spouse would be expected to live and, therefore, how long the life insurance proceeds might have to last. The item in orange is how many years the spouse would be expected to live in the

event that the member died in the year entered on the bottom of the "*Personal*" sheet. The program's calculation is based on the spouse being alive at this point.

We hope this document adequately explains how to use these programs and contributes to your getting the maximum use out of them. Please provide any feedback, especially anything that would improve these programs. These are your programs and were created for your use. Feel free to contact either one of us with questions or comments:

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